EXHIBIT 18

Attorney Docket No.: 22501-0006RX2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors : Sullivan et al.	Patent No. : 6,495,633
Control No. : 95/000,444	Art Unit : 3993
Reexam Filed: March 3, 2009	Examiner : Jeffrey L. Gellner
Title : MULTI-LAYER GOLF BALL	

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Central Reexamination Unit
Commissioner for Patents
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AMENDMENT IN REPLY TO ACTION OF MAY 26, 2009

Please amend the above-identified patent as follows:

CERTIFICATE OF MAILING BY EXPRESS MAIL

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the patent:

Listing of Claims:

1-8. (Cancelled).

9. (Amended) A multi-layer golf ball comprising:

a spherical core;

an inner cover layer molded over said spherical core to form a spherical intermediate ball, said inner cover layer comprising an ionomeric resin including about 17% to about 25% by weight of an alpha, beta-unsaturated carboxylic acid and having a modulus of from about 15,000 to about 70,000 psi,

wherein said core with said inner cover layer molded thereon comprise an intermediate ball, and said intermediate ball has a coefficient of restitution of greater than 0.801;

an outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball, the outer comprising a non-ionomeric thermoplastic selected from the group consisting of polyester elastomer, polyester polyurethane and polyester amide, said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.

10. (Original) A golf ball comprising:

a solid polybutadiene core;

an inner cover layer molded on said core, the inner cover layer comprising a high acid ionomer including at least 16% by weight of an alpha, beta-unsaturated carboxylic acid, wherein said core with said inner cover layer molded thereon comprise an intermediate ball, and said intermediate ball has a coefficient of restitution of greater than 0.801; and

an outer cover layer molded on said inner cover layer, said outer cover layer comprising a relatively soft polymeric material selected from the group consisting of low flexural modulus ionomer resins and non-ionomeric elastomers.

11. (Original) The golf ball according to claim 10, wherein said non-ionomeric elastomer is a polyurethane.

12. (Original) A golf ball according to claim 10, wherein said golf ball has a coefficient of restitution of at least 0.770.

13. (Original) A golf ball according to claim 10, wherein said outer cover layer has a Shore C hardness of about 74.

14. (Original) A golf ball according to claim 10, wherein said outer cover is about 0.030 inches in thickness.

15. (New) A golf ball according to claim 10, wherein said intermediate ball has a coefficient of restitution of greater than 0.807.

16. (New) A golf ball according to claim 10, wherein said intermediate ball has a coefficient of restitution of greater than 0.810.

17. (New) A golf ball comprising:

a solid polybutadiene core;

an inner cover layer molded on said core, the inner cover layer comprising a high acid ionomer including at least 16% by weight of an alpha, beta-unsaturated carboxylic acid, wherein said core with said inner cover layer molded thereon comprise an intermediate ball, and said intermediate ball has a coefficient of restitution of greater than 0.801; and

an outer cover layer molded on said inner cover layer, said outer cover layer comprising a relatively soft polymeric material, wherein the relatively soft polymeric material is a polyurethane.

18. (New) A golf ball according to claim 17, wherein said golf ball has a coefficient of restitution of at least 0.770.

19. (New) A golf ball according to claim 17 wherein said outer cover layer has a Shore C hardness of about 74.

20. (New) A golf ball according to claim 17, wherein said outer cover is about 0.030 inches in thickness.

21. (New) A golf ball according to claim 17, wherein said intermediate ball has a coefficient of restitution of greater than 0.807.

22. (New) A golf ball according to claim 17, wherein said intermediate ball has a coefficient of restitution of greater than 0.810.

23. (New) A golf ball according to claim 9, wherein said intermediate ball has a coefficient of restitution of greater than 0.807.

24. (New) A golf ball according to claim 9, wherein said intermediate ball has a coefficient of restitution of greater than 0.810.

REMARKS

Claims 1-8 of U.S. 6,623,381 ("the '381 patent") recite a golf ball featuring a core, an inner cover layer comprising a high acid ionomer, and an outer cover layer comprising a blend of certain ionomer resins. In view of the rejections raised in the Office Action, and various Board of Patent Appeals and Interferences ("BPAI") decisions, these claims have been cancelled herein without prejudice.[1] The cancellation of claims 1-8 simplifies prosecution by disposing of Grounds for Rejection Nos. 1-64 raised in the present reexamination proceeding.[2]

Independent claim 9 has been amended to recite that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.801; this limitation is also found in independent claim 10. New claims 15-24 have been added, including new independent claim 17. Thus, claims 9-24 are pending. Written description support for amended claim 9 and new claims 15-24 is found throughout the original specification, as described below. Thus, no new matter has been added.

None of the new or amended claims broadens the claim scope beyond the original patent claims. For example, amended claim 9 contains the additional limitation that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.801, and thus is narrower than original claim 9. New claims 23 and 24 depend directly from amended claim 9. New claims 15-16 depend directly from original claim 10. New independent claim 17 is identical to original claim 10 except that it further limits the outer cover layer to a polyurethane. New claims 18-22 depend directly on claim 17. Thus, each new claim includes all of the elements from original patent claim 9 or 10, and therefore is not broader than original patent claim 9 or 10. The patentability of these new claims is described in more detail below.

The Patent Owner invites suggestions from the Examiner in the event that any issue would delay confirming patentability of one or more of the pending claims.

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[1] The BPAI decisions are (a) Appeal No. 2004-1262, U.S.S.N. 08/815,556; (b) Appeal No. 2001-1989, U.S.S.N. 09/121,628; (c) Appeal No 2004-0049, U.S.S.N. 10,047,626; (d) Appeal No. 2004-1954, U.S.S.N. 09/917,539; (e) Appeal No. 2005-0806, U.S.S.N. 10/179,812; and (f) Appeal No. 2006-1962, U.S.S.N. 10/712,942.

[2] Grounds 1-64 were raised by the Requester in its initial request for reexamination. In the Office Action mailed 5/26/09, the Examiner declined to adopt Grounds 63 and 64. See 5/26/09 Office Action, p. 26.

EXPLANATION OF SUPPORT FOR THE PENDING CLAIMS

In accordance with MPEP § 2666.01 and 37 C.F.R. § 1.530(e), Patent Owner submits the following explanation of support for the pending claims. Although the citations below are directed to the illustrative teachings found in the issued patent document, it should be understood that additional written description support can be found throughout one or more of the priority applications.

Claims 1-14

- Original patent claims 1-8 have been cancelled herein without prejudice.
- Claim 9 has been amended to recite that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.801. Written description support for this claim can be found, e.g., in original patent claim 10 and Table 7 of the specification.
- Claims 10-14 are retained in their original form (no amendments).

Claims 15-24

- New claims 15 and 16 depend from claim 9, and recite that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.807 (claim 15) or greater than 0.810 (claim 16). Written description support for these claims can be found, e.g., in Table 7 of the specification.
- New claim 17 is identical to original claim 10 except that it requires the outer cover layer to be a polyurethane. Written description support for this claim can be found, e.g., in original claims 10 and 11. In addition, the specification contains numerous examples of polyurethanes (see, e.g., cols. 12 and 17-18).
- New claims 18, 19, and 20 depend from claim 17, and correspond to original patent claims 12, 13, and 14, respectively. Thus original patent claims 12, 13, and 14 provide written description support for new claims 18, 19, and 20.
- New claims 21 and 22 depend from claim 17, and recite that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.807 (claim 21) or greater than 0.810 (claim 22). Written description support for these claims can be found, e.g., in Table 7 of the specification.
- New claims 23 and 24 depend from claim 9, and recite that the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.807 (claim 23) or greater than 0.810 (claim 24). Written description support for these claims can be found, e.g., in Table 7 of the specification.

PATENTABILITY OF PENDING CLAIMS

Claims 9-24 are currently pending following the cancellation of claims 1-8. Following the amendment to claim 9, each recites a golf ball in which the core and inner cover layer form an intermediate ball having a coefficient of restitution of greater than 0.801. New claims 15-16 and 21-24 further define the coefficient of restitution as greater than 0.807 (claims 15, 21, and 23) or greater than 0.810 (claims 16, 22, and 24). For purposes of discussion, we will group the outstanding rejections into two groups: (1) rejections based primarily upon Nesbitt, U.S. 4,431,193 ("Nesbitt") and (2) rejections based upon Sullivan, U.S. 5,803,831 ("Sullivan '831").

A. Claims 9-24 are patentable over Nesbitt

Claims 9-14 stand rejected under 35 U.S.C. § 103 over Nesbitt in combination with various secondary references (Horiuchi, Yabuki, Statz, or Research Disclosure).[3] The Examiner relies upon Nesbitt for disclosing an intermediate ball (core plus inner cover layer) having a coefficient of restitution of greater than 0.801.[4] The Examiner acknowledges that none of the secondary references discloses an intermediate ball that meets the coefficient of restitution limitation.[5] In the case of claims reciting an outer cover layer comprising a polyurethane, the Examiner further relies on either (a) Nesbitt incorporating Molitor '637 by reference or (b) Molitor '751.[6] However, Nesbitt does not, in fact, describe an intermediate ball having a coefficient of restitution of greater than 0.801, nor does Nesbitt incorporate Molitor '637 by reference. In addition, Molitor '751 is not properly combinable with Nesbitt.

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[3] See Grounds for Rejection Nos. 65-71, 75-78, 80-85, 92-99, 105-108, 113-116, 120-127, and 129-131 set forth in Office Action mailed 5/26/09.

[4] See, e.g., Office Action mailed 5/26/09 at p. 98, where the Examiner refers to a statement in Nesbitt appearing at col. 3, lines 26-32 to the effect that the intermediate ball has a coefficient of restitution "of 0.800 or more."

[5] See, e.g., Office Action mailed 5/26/09 at pp. 115-118 where the Examiner refused to adopt rejections based upon Viollaz in combination with Horiuchi, Yabuki, Statz, or Research Disclosure on the ground that none of the references disclosed the coefficient of restitution limitation.

[6] See Grounds for Rejection Nos. 65-71 (claim 9), 76-78 and 80-83 (claim 10), 92-99 (claim 11), 113-116 (claim 12), and 124-127 (claim 13) set forth in Office Action mailed 5/26/09.

1. Nesbitt does not disclose an intermediate ball having a coefficient of restitution greater than 0.801

Nesbitt discloses a golf ball having a core and a two-layer cover. The inner cover layer is a relatively hard, high flex modulus ionomer resin (e.g., Surlyn 1605) and the outer cover, conversely, is a relatively soft, low flex modulus ionomer resin (e.g., Surlyn 1855).[7] Although Nesbitt states that the "spherical body comprising the core or center 12 and layer 14 of the hard, high modulus Surlyn resin has a coefficient of restitution of 0.800 or more,"[8] Nesbitt, in fact, was unable to create balls in which the combination of core and inner cover layer had a coefficient of restitution of greater than 0.801, as claims 9-24 of the '381 patent require. The data presented in the '381 patent itself proves this.

Table 7 of the '381 patent reports coefficient of restitution ("COR") values for various intermediate golf balls featuring a core and an inner cover layer. Balls designated A, B, and C are balls prepared according to the '381 patent, while Ball D is representative of Nesbitt's balls because it features an inner cover layer made of Surlyn 1605 ionomer resin.[9] As the data presented in Table 7 demonstrates, balls A, B, and C had coefficient of restitution values greater than 0.801 (0.811, 0.810, and 0.807, respectively), while Ball D's coefficient of restitution value was only 0.793.

Nesbitt provides no guidance as to how to achieve intermediate balls having coefficient of restitution values greater than 0.801. The only ionomer resin that Nesbitt specifically discloses for the inner cover layer, Surlyn 1605, results in a coefficient of restitution value that is substantially less than 0.801, as shown in Table 7 of the '381 patent. Nesbitt, therefore, fails to disclose a golf ball in which the core and inner cover layer form an intermediate ball having a coefficient of restitution value of greater than 0.801, as claims 9-24 require. This is particularly pronounced in the case of new claims 15-16 and 21-24, which require even higher coefficient of restitution values.

During the original prosecution, the Examiner made various rejections based upon the combination of Nesbitt and Horiuchi. However, she allowed application claim 32, which

[7] Nesbitt, col. 2, lines 31-49.
[8] *Id.*, col. 3, lines 30-32.
[9] The '381 patent, col. 21, lines 10-14 and Table 7.

was the only pending claim that recited an intermediate ball with a coefficient of restitution value greater than 0.801. Application claim 32 subsequently issued as patent claim 10. The original Examiner, therefore, recognized the significance of the coefficient of restitution limitation with respect to distinguishing Nesbitt plus Horiuchi. Nothing in the Office Action issued in the current reexamination proceedings adds anything new, particularly given the Examiner's acknowledgement that neither Horiuchi nor Yabuki nor Statz nor Research Disclosure supplies the missing coefficient of restitution element that claims 9-24 require. For at least these reasons, each of the rejections based upon Nesbitt should be withdrawn and the patentability of original claims 9-14, and new claims 15-24, confirmed.

2. Nesbitt does not incorporate Molitor '637 by reference

In the case of claims reciting an outer cover layer comprising a polyurethane, the Examiner relies on either (a) Nesbitt incorporating Molitor '637 by reference or (b) Molitor '751 to supply the polyurethane element. Nesbitt, however, does not incorporate Molitor '637 by reference. The Examiner explains the basis for his position that Nesbitt incorporates Molitor '637 by reference at pp. 24-26 of the Office Action mailed 5/26/09. In brief, it is the Examiner's position that Nesbitt's claims, as filed, were not limited to ionomer resins and thus required examples of additional resins in order to be patentable. Accordingly, Molitor 637's disclosure of additional resins, such as polyurethanes, constitutes "essential material" for Nesbitt's claims. Coupled with what the Examiner alleges is a sufficiently particular reference in Nesbitt to Molitor '637's polyurethanes, the Examiner concludes that Nesbitt incorporates Molitor '637's disclosure regarding polyurethanes by reference. The Examiner's reasoning, however, is flawed.

The District Court of Delaware, in connection with co-pending litigation between Callaway Golf and Acushnet involving another Callaway Golf patent (U.S. 6,506,130; "the '130 patent"), held that as a matter of law on summary judgment, Nesbitt did not incorporate Molitor '637 by reference.[10] In other words, even viewing all underlying facts in a light most favorable to Acushnet, and drawing all reasonable inferences from those facts in a light most

[10] Memorandum Opinion dated 11/20/07, pp. 6-13. A copy of the Memorandum Opinion is attached as Exhibit 1.

favorable to Acushnet, the Court held that Nesbitt simply does not identify Molitor '637's polyurethanes with the level of particularity that incorporation by reference requires as a matter of law. The District Court's well-reasoned opinion is applicable on all fours to the current set of rejections because the Court expressly considered and rejected the grounds on which the Examiner now relies to support the incorporation by reference-based rejections.

The legal standard governing incorporation by reference is set forth in *Advanced Display Systems Inc. v. Kent State University*, 212 F.3d 1272, 1282, 54 U.S.P.Q.2d 1673, 1679 (Fed. Cir. 2000). Under this standard, the host document "must cite the material [to be incorporated by reference] in a manner that makes clear that it is effectively part of the host document as if it were explicitly contained therein." *Id.* Accordingly, the host document must "identify with detailed particularity what specific material it incorporates" and "clearly indicate where that material is found in the various documents." *Id.* "[A] mere reference to another application, or patent, or publication is not an incorporation of anything contained therein ...." *In re Seversky*, 474 F.2d 671, 674, 177 U.S.P.Q. 144, 146 (C.C.P.A. 1973). Thus, for example, the Federal Circuit held that the following statement in a host document was not sufficient to incorporate the entire disclosure of another document by reference: "The vertical skein is not the subject matter of this invention and any prior art vertical skein may be used. Further details relating to the construction and deployment of a most preferred skein are found in the parent U.S. Pat. No. 5,639,373, and in Ser. No. 08/690,045, the relevant disclosure of each of which are included by reference thereto as if fully set forth herein." *Zenon Environ., Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1378-82, 85 U.S.P.Q.2d 1118, 1124 (Fed. Cir. 2007).

Applying these legal standards, the District Court of Delaware correctly held that Nesbitt did not incorporate Molitor '637 because, as a matter of law, Nesbitt failed to identify specific passages of Molitor '637 with sufficient particularity to constitute an incorporation by reference. The passage in Nesbitt upon which the Examiner and Acushnet rely reads as follows:

> The inner, intermediate, or first layer or ply 14 and the outer cover, second layer or ply 16 or either of the layers may be cellular when formed of a foamed natural or synthetic polymeric material. Polymeric materials are preferabl[e] such as ionomer resins which are foamable. Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a

> character which may be employed for one or both layers 14 and 16 for the golf ball of this invention.[11]

In holding that this passage failed to incorporate by reference disclosure from Molitor '637 relating to polyurethanes, the District Court reasoned:

> Plaintiff [Callaway Golf] argues that Nesbitt does not specify, let alone with "detailed particularity," the use of polyurethane or ionomer blends by Molitor '637, nor does it "clearly indicate" where Molitor '637 discusses polyurethane or ionomer blends.
>
> The court agrees with plaintiff. There is no dispute that Molitor '637 discloses—in its text and examples—resins that are both ionomers and nonionic resins. Nesbitt does not point to, or otherwise specify, the incorporation of polyurethane from Molitor '637. Nesbitt does not point to, or otherwise specify, the use of a blend of two ionomer resins as a cover layer, as disclosed in Molitor '637. Nor does Nesbitt point to any particular text or example of Molitor '637 which would tend to bridge these gaps. Moreover, although not specifically limited to ionomer resins, the reference to Molitor '637 occurred immediately following the statement that foamable ionomer resins are preferred. The court finds that Molitor '637 is mentioned in Nesbitt to identify examples of suitable resins, preferably ionomer resins, and not to specifically incorporate polyurethane.[12]

Unlike the District Court, which correctly construed the above-quoted passage from Nesbitt to mean that Nesbitt was saying that ionomer resins were preferred, the Examiner misconstrues the passage to mean "that the polymeric materials preferred by Nesbitt are those that, like ionomer resins, are foamable."[13] This is not what the passage says. The Examiner then proceeds from this faulty construction and reasons that Nesbitt must be incorporating by reference every single foamable resin that Molitor '637 lists, including polyurethanes, because Nesbitt needs examples of foamable resins other than Surlyn resins (a type of ionomer resin) for his claims to be valid under 35 U.S.C. § 112.

The Examiner's reasoning is flawed. Anticipation, and the related issue of incorporation by reference, are determined based upon what is disclosed within the four corners of the host patent. The Federal Circuit explained this standard in *Advanced Display Systems*, 212 F.3d at 1282, 54 U.S.P.Q.2d at 1673 (citations omitted):

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[11] Nesbitt, col. 3, lines 51-61.
[12] Memorandum Opinion dated 11/20/07, pp. 8-9 (footnote omitted) (Exhibit 1).
[13] Office Action mailed 5/26/09, p. 24.

> [I]nvalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently such that a person of ordinary skill in the art could practice the invention without undue experimentation .... Material not explicitly contained in the single, prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document .... Incorporation by reference provides a method for integrating material from various documents into a host document—a patent or printed publication in an anticipation determination—by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein .... To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates by reference and clearly indicate where that material is found in the various documents.

The requirement that the material incorporated by reference be defined clearly and with "detailed particularity" follows from the need to determine anticipation based upon the disclosure found within the four corners of the host patent. Requiring a person of ordinary skill, as part of the incorporation by reference evaluation, to perform a validity analysis of the claims of the host patent to see if they comply with 35 U.S.C. § 112, as the Examiner suggests, violates the "four corners" anticipation standard.

The § 112 validity analysis is particularly inappropriate in the present case because all of Nesbitt's claims explicitly recite **ionomer** resins—not foamable resins generally. Surlyn resins are one type of ionomer resin. Accordingly, even if Nesbitt needed examples of resins in addition to Surlyn resins in order to support the breadth of his claims, a person of ordinary skill would conclude that those additional examples necessarily would have to be ionomer resins because that is what Nesbitt claims. Although Nesbitt's claims, as originally filed, may have been broader, a person of ordinary skill would only discover this fact after reading the Nesbitt patent's prosecution history. He would not glean it from the disclosure found within the four corners of the Nesbitt patent itself.

Nesbitt himself did not consider polyurethanes to be part of his invention. During his deposition taken in connection with prior litigation between Callaway Golf and Acushnet, he testified:

> Q. In your 193 patent Mr. Rosenthal earlier referenced you a paragraph that talked about the Molitor patent. Do you remember that?
>
> A. I remember that.

> Q. If somebody read that to themselves and said to you, "Oh, you must have been referring to polyurethane as a potential outer cover material," what would you say to that?
>
> A. No way.[14]

Nesbitt's testimony is consistent with what is apparent from the four corners of the Nesbitt patent—specifically, that Nesbitt's citation of Molitor '637 is for examples of foamable ionomer resins. Nesbitt does not incorporate by reference the polyurethanes found in one of Molitor '637's many examples. Accordingly, the Examiner cannot rely upon Nesbitt incorporating Molitor '637 by reference to supply the polyurethane element set forth in the '381 claims.

3. Nesbitt cannot be combined with Molitor '751

The Examiner also proposed combining Nesbitt and one of the aforesaid secondary references (Horiuchi, Yabuki, Statz, or Research Disclosure) with Molitor '751, relying upon Molitor '751 to supply the polyurethane element required in the '381 claims. Molitor '751 describes a golf ball having a single layer cover made of a blend of polyurethane and ionomer. Molitor '751, however, provides no reason to substitute his **single** layer, polyurethane-containing cover for Nesbitt's ionomer layer that forms the **outer** layer of Nesbitt's **two-layer** cover construction. And that proposed substitution is only the first step because the '381 claims further require the inner cover layer to be a high acid ionomer resin, rather than Nesbitt's low acid ionomer resin. The proposed rejections, therefore, involve completely de-constructing Nesbitt's golf ball and re-assembling it using individual pieces found in other, disparate references.

In *KSR*, the U.S. Supreme Court recognized that many patentable inventions represent the combination of elements already known in the prior art. Thus, the fact that the individual elements were known does not mean that the invention would have been obvious. The Court stated:

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[14] Nesbitt Deposition, p. 235, ll. 13-21. Excerpts from the Nesbitt Deposition are attached as Exhibit 2.

> As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.[15]

Thus, rather than focusing on whether individual elements were known, the Court emphasized the role of predictability in determining whether a claimed invention would have been obvious:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a **predictable variation**, § 103 likely bars its patentability ....
>
> When there is a design need or market pressure to solve a problem and there are a finite number of identified, **predictable solutions**, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.[16]

Predictability, therefore, is a key factor in the obviousness analysis. Golf ball performance is anything but predictable because the choice of materials, as well as the interactions among various layers in the golf ball construction, significantly affect performance. It is improper to ignore these interactions and instead merely offer a paper reconstruction of the claimed golf balls.

The Examiner has not identified any disclosure in the Molitor '751 patent itself that would suggest the suitability of Molitor '751's single layer polyurethane cover as one of the layers of a two-layer cover, let alone its specific use as the outer layer of a two-layer cover featuring an inner layer made of a high acid ionomer resin. Accordingly, the rejections under 35 U.S.C. § 103 should be withdrawn, and the patentability of claims 9-24 confirmed.

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[15] *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007).
[16] *Id.* at 1740 and 1742 (emphasis added).

B. Claims 10-24 are patentable over Sullivan '831

The Examiner rejected claims 10-14 under 35 U.S.C. § 102(b) over the Sullivan '831 patent.[17] The Sullivan '831 patent issued (and thus published) on September 8, 1998. The '381 patent issued based upon an application filed February 21, 2002. However, the '381 patent claims priority, via a series of continuation and divisional applications, to an application filed on June 1, 1993 (U.S.S.N. 08/070,510). Therefore, the Sullivan '831 is not available as prior art unless claims 10-14 are entitled only to the February 21, 2002 filing date. For the reasons discussed below, this is not the case. Claims 10-14, as well as new claims 15-24, are entitled to the June 1, 1993 filing date, thereby removing the Sullivan '831 patent as a prior art reference.

35 U.S.C. § 120 provides that a claim may be entitled to the benefit of an earlier filed application if the latter discloses the subject matter of the claim "in the manner provided by the first paragraph of section 112 of this title." The first paragraph of section 112, in turn, states:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

MPEP § 2163 II (A) (3)(b) states that in order to satisfy the "written description" requirement of 35 U.S.C. § 112, first paragraph,

> Each claim limitation must be expressly, implicitly, or inherently supported in the originally filed disclosure. When an explicit limitation in a claim "is not present in the written description whose benefit is sought it must be shown that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation." Hyatt v. Boone, 146 F.3d 1348, 1353, 47 USPQ2d 1128, 1131 (Fed. Cir. 1998).

Here, the written description issue centers around the phrase "said outer cover layer comprising a relatively soft polymeric material selected from the group consisting of low flexural modulus ionomer resins and non-ionomeric elastomers" appearing in claim 10. The Examiner apparently has adopted the Requester's position that the earlier filed applications to which the '381 patent claims priority provide written description support only for non-

[17] See Grounds for Rejection Nos. 91, 104, 119, 128, and 132 in the Office Action mailed 5/26/09.

ionomeric thermoplastic elastomers. Accordingly, the reference to "non-ionomeric elastomers" broadens the claim, thereby entitling it only to a February 21, 2002 filing date, with the result that the intervening Sullivan '831 patent invalidates the claim under 35 U.S.C. § 102(b).

The Examiner and the Requester's analysis is incorrect. Claim 10, and related dependent claims 11-14, are entitled to a June 1, 1993 filing date because a person of ordinary skill in the field of golf ball design and manufacture, reading the text of the June 1, 1993 application, would have appreciated that inventor Sullivan regarded non-ionomeric elastomers generally to be part of his invention. In support, Patent Owner offers the declaration of John Calabria.

As Mr. Calabria notes in his declaration, the text of the '381 patent, which corresponds to the text appearing in the June 1, 1993 application, teaches that the particular material for the outer cover layer must "produce the playability and durability characteristics desired without adversely affecting the enhanced travel distance characteristic produced by the high acid ionomer resin composition [of the inner cover layer]."[18] The text of the '381 patent lists suitable materials for performing this function, including "a soft, relatively low modulus ionomer, ionomer blend or other non-ionomeric thermoplastic elastomer."[19] The '381 patent also provides numerous examples of specific ionomeric and non-ionomeric resins that would be suitable for use as the outer cover layer, including polyurethanes.

In Mr. Calabria's opinion, based upon his experience in the golf ball industry, a person of ordinary skill in the field of golf ball design and manufacture, as of June 1, 1993, would have understood from reading the text of the '381 patent that ionomer and non-ionomeric elastomer materials in general could be used as the outer cover layer of the golf ball. Such a person also would have understood that non-ionomeric thermoplastic elastomers, including the specific polyurethanes listed in the '381 patent, were merely examples of the larger genus of non-ionomeric elastomers to which the '381 patent was directed.[20]

According to Mr. Calabria, both thermoset and thermoplastic polyurethanes are examples of non-ionomeric elastomers. Both were used in golf ball covers as of June 1,

[18] The '381 patent, col. 17, lines 64-67.
[19] See, e.g., the '381 patent at col. 3, line 65 to col. 4, line 1 and col. 12, lines 14-18.
[20] Calabria Declaration, ¶¶ 5-6.

1993, albeit in the context of single layer covers. The choice between the use of thermoset and thermoplastic polyurethanes generally was driven by whatever manufacturing process a company was using at the time in its manufacturing facilities. Companies using injection molding machinery would typically research and use thermoplastic polyurethane, because it was readily processed using existing equipment and the scrap could be remelted and reused. Companies using compression molding machinery would typically research and use thermoset polyurethane, because these materials lent themselves more readily to compression molding or casting techniques using open half shell molds. Thus, both thermoset and thermoplastic polyurethanes were known cover materials for golf balls. Accordingly, a person of ordinary skill in the field of golf ball design and manufacturing, reading the '381 patent, would have recognized that both types of polyurethanes could be used as the outer cover layer of the golf ball described in the patent. Thus, this person would have recognized that the '381 patent described non-ionomeric elastomers generally, and non-ionomeric polyurethanes specifically, as part of its invention.[21]

Mr. Calabria also observes that another Sullivan patent, U.S. 6,495,633 ("the '633 patent"), further demonstrates that persons of ordinary skill in the field of golf ball design and manufacture used the term "non-ionomeric thermoplastic elastomer" as a generic description of non-ionomeric elastomers. For example, at col. 25, lines 1-17, the '633 patent states:

> Other soft, relatively low modulus non-ionomeric thermoplastic elastomers may also be utilized to produce the outer cover layer as long as the non-ionomeric thermoplastic elastomers produce the playability and durability characteristics desired without adversely effecting [sic] the enhanced travel distance characteristic produced by the high acid ionomer resin composition. These include, but are not limited to, thermoplastic polyurethanes such as Texin thermoplastic polyurethanes from Mobay Chemical Co. and the Pellethane thermoplastic polyurethanes from Dow Chemical Co.; non-ionomeric thermoset polyurethanes including but not limited to those disclosed in U.S. Pat. No. 5,334,673; cross-linked metallocene catalyzed polyolefins; ionomer/rubber blends such as those in Spalding U.S. Pat. Nos. 4,986,545; 5,098,105 and 5,187,103; and Hytrel polyester elastomers from DuPont and Pebax polyesteramides from Elf Atochem S.A.

[21] *Id.*, ¶ 7.

Mr. Calabria's declaration, as well as evidence provided by the '633 patent, demonstrate that claim 10, as well as dependent claims 11-14, are entitled to a filing date of June 1, 1993. The Sullivan '831 patent, therefore, is not available as prior art. Accordingly, the patentability of claims 10-14 should be confirmed.

New claims 15-16 depend on claim 10. Accordingly, they are entitled to a June 1, 1993 filing date for the same reasons as claim 10.

New claims 23-24 depend on claim 9, which is not the subject of a rejection based upon Sullivan '831 patent. Therefore, these claims are patentable over the Sullivan '831 patent as well.

New claims 17-22 expressly recite that the outer cover layer is a polyurethane, rather than a "non-ionomeric elastomer." The text of the '381 patent, as well as the June 1, 1993 application, are replete with references to polyurethanes.[22] Therefore, there is no doubt that the inventor regarded polyurethanes to be part of his invention. Accordingly, claims 17-22 are entitled to a June 1, 1993 and thus patentable over the Sullivan '831 patent.

CONCLUSION

The Patent Owner submits that claims 9-24 are patentable over the cited references. Reconsideration and allowance is respectfully requested. The Patent Owner invites suggestions from the Examiner in the event that any issue would delay the prompt confirmation of patentability of one or more of the pending claims.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Nothing in this paper should be construed as a concession of any issue except as specifically stated herein. The Patent Office should infer no (i) adoption of a position with respect to patentability, (ii) change in the Patent Owner's position with respect to any claim or subject matter of the invention, or (iii) acquiescence to any position expressed in the Office Action, based on the amendments made herein.

[22] See, e.g., the '381 patent, col. 12 and cols. 17-18.

Please apply any charges to deposit account 06-1050.

Respectfully submitted,

Date: July 27, 2009

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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CALLAWAY GOLF COMPANY,	)
	)
Plaintiff,	)
	)
v.	) Civ. No. 06-091-SLR
	)
ACUSHNET COMPANY,	)
	)
Defendant.	)

ORDER

At Wilmington this 20th day of November 2007, consistent with the memorandum opinion issued this same date;

IT IS ORDERED that:

1. Plaintiff's motion for summary judgment of breach of contract (D.I. 197) is granted.

2. Plaintiff's motion for summary judgment of no anticipation (D.I. 200) is granted.

3. Defendant's motion for partial summary judgment regarding incorporation by reference (D.I. 201) is denied.

4. Defendant's motion for summary judgment of no breach of contract (D.I. 213) is denied.

5. Defendant's motion for summary judgment of invalidity (D.I. 215) is denied.

United States District Judge

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CALLAWAY GOLF COMPANY,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 06-091-SLR
	)	
ACUSHNET COMPANY,	)	
	)	
Defendant.	)	

Thomas L. Halkowski, Esquire of Fish & Richardson P.C., Wilmington, Delaware. Counsel for Plaintiff. Of Counsel: Frank E. Scherkenbach, Esquire of Fish and Richardson P.C., Boston, Massachusetts; Roger A. Denning, Esquire of Fish and Richardson P.C., San Diego, California.

Richard L. Horwitz, Esquire and David E. Moore, Esquire of Potter Anderson & Corroon LLP, Wilmington, Delaware. Counsel for Defendant. Of Counsel: Joseph P. Lavelle, Esquire, Kenneth W. Donnelly, Esquire, and Brian A. Rosenthal, Esquire of Howrey LLP, Washington, D.C.

MEMORANDUM OPINION

Dated: November 20, 2007
Wilmington, Delaware

ROBINSON, District Judge

I. INTRODUCTION

Callaway Golf Company ("plaintiff" or "Callaway") filed this action against Acushnet Company ("defendant" or "Acushnet") on February 9, 2006, alleging infringement of U.S. Patent Nos. 6,506,130 ("the '130 patent"), 6,503,156 ("the '156 patent"), 6,210,293 ("the '293 patent"), and 6,595,873 ("the '873 patent"). (D.I. 1) Plaintiff alleges that defendant's Titleist Pro V1® brand golf balls embody the technology claimed in one or more claims of the asserted patents. (Id. at ¶¶ 17-21) Pending before the court are plaintiff's motions for summary judgment of no anticipation (D.I. 200) and for breach of contract (D.I. 197). Also pending before the court are defendant's motions for summary judgment of invalidity (D.I. 215) and no breach of contract (D.I. 213), as well as defendant's motion for partial summary judgment that U.S. Patent No. 4,274,637 to Molitor ("Molitor '637") is incorporated by reference into a particular piece of prior art (D.I. 201). The court has jurisdiction over these matters pursuant to 28 U.S.C. § 1338.

II. BACKGROUND

A. Technology at Issue

Golf balls are typically identified as two-piece or three-piece balls. Two-piece balls have a core, which is either solid or "wound," and an outer layer. A core that is considered solid is made of rubber and can be one solid piece or multiple layers. A wound core is made of elastic windings wrapped around either a solid or liquid-filled center. Three-piece balls have an additional layer covering the core, so that the ball is characterized as having a core, an inner cover layer and an outer cover layer.

The challenge faced by golf ball designers has been to create a ball that is both capable of traveling great distances and of achieving the desired "feel," or spin. Historically, balls would have to be very hard in order to achieve distance when struck by a fast-moving driver. To achieve spin, however, balls had to be softer so that they would better grip to the face of angled clubs such as irons. The patents at issue present "dual personality" balls that achieve a marriage of these diametrically-opposed objectives.

B. Patents

Michael J. Sullivan is the sole named inventor on each of the '130, '156, '293, and '973 patents in suit (collectively, the "Sullivan patents"). The Sullivan patents have substantially identical specifications, and claim priority to the same application.[1]

The Sullivan patents each claim a multi-layer golf ball comprising a core, an inner cover layer made of a low acid ionomer, and an outer cover layer made of polyurethane.[2] The claims differentiate between the hardness and thickness of these layers. For example, claim 1 of the '293 patent claims:

> 1. A golf ball comprising: a core; an inner cover layer having a **Shore D hardness of 60 or more molded on said core**, said inner cover layer having a **thickness of 0.100 to 0.010 inches**, said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and an outer cover layer having a **Shore D hardness of 64 or less molded on said inner cover layer**, said outer cover layer having a **thickness of 0.010 to 0.070 inches**, and said outer cover layer comprising a relatively soft polyurethane material.

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[1]U.S. Patent Application No. 08/070,510, filed June 1, 1993.

[2]Two of the asserted claims, claims 1 and 2 of the '130 patent, do not require that the outer cover layer include polyurethane.

(Emphasis added) By way of contrast, claim 1 of the '156 patent claims:

> 1. A golf ball comprising: a core; an inner cover layer disposed on said core, said inner cover layer having a **Shore D hardness of at least 60**, said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and an outer cover layer disposed on said inner cover layer, said outer cover layer having a **Shore D hardness of about 64 or less**, a **thickness of from about 0.01 to about 0.07 inches**, and comprising a polyurethane material.

(Emphasis added)

C. Products

Plaintiff and defendant have both had success selling multi-layer golf balls. Plaintiff markets several balls embodying the patented technology, including the Callaway Golf® Rule 35®, the CTU 30, Callaway Golf® HX®, Ben Hogan®, Strata®, Tour Ace®, and Top-Flite® balls. (D.I. 1 at ¶ 16) Defendant markets and sells golf balls under the Titleist® brand, including the Titleist Pro V1®, Titleist Pro V1x®, and Titleist Pro V1*® series of balls (collectively, the "Pro V1 balls"). (Id. at ¶ 19)

D. The 1996 Settlement Agreement and Reexaminations

In 1996, Acushnet entered into an agreement with Spalding and Evenflo Companies, Etc. ("Spalding"), plaintiff's predecessor-in-interest, and Lisco, Inc., a wholly owned subsidiary of Spalding, to resolve various patent-related claims ("the Agreement"). (D.I. 199, ex. 1) The Agreement contained a "Dispute Resolution" clause, providing that

> [a]ny dispute arising out of or relating to patents, including the above mentioned patents, other intellectual property owned or controlled by the parties, or claims relating to advertising shall be resolved in accordance with the procedures specified in this [s]ection, which shall be the sole and exclusive procedure for the resolution of any such disputes.

(Id. at 15, ¶ 19.1) The Agreement continues to detail a procedure involving negotiations and mediation. (Id. at 16-17, ¶¶ 19.2-6) If mediation fails to resolve a dispute, the Agreement provides that,

> [a]t the conclusion of a referral to the Magistrate or other judge as set forth in 19.6, should the dispute remain unresolved, either party may initiate legal proceedings but only in the United States District Court for the District of Delaware, and no other. Said court retains jurisdiction of the parties for such purposes.

(Id. at 18, ¶ 19.7)

After two unsuccessful mediations in 2005 regarding Spalding's rights under the Sullivan patents, Acushnet filed inter partes reexamination requests for each patent with the United States Patent and Trademark Office ("PTO") on January 17, 2006.[3] (D.I. 199, exs. 5-8) Plaintiff filed the present infringement action shortly thereafter on February 9, 2006. (D.I. 1)

The reexaminations of the Sullivan patents are still pending as of the date of this opinion. Each of the asserted claims in this lawsuit[4] have been rejected under 35 U.S.C. § 102 and/or § 103(a) on non-final office actions in the respective reexaminations.[5] More specifically, the claims of the '130, '156 and '293 patents have been rejected as obvious, while the claims of the '873 patent have been rejected as anticipated and as obvious. The prior art cited in the reexaminations is relied on by

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[3]Each reexamination request was executed on January 13, 2006. (D.I. 199, exs. 5-8)

[4]Plaintiff asserts claims 1, 2, 4, and 5 of the '293 patent; claims 1-11 of the '156 patent; claims 1, 2, 4, and 5 of the '130 patent; and claims 1 and 3 of the '873 patent.

[5]RE 95/000,120, 95/000,121, 95/000,122, and 95/000,123.

defendant in its invalidity case in the present litigation.

III. STANDARD OF REVIEW

A court shall grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). The moving party bears the burden of proving that no genuine issue of material fact exists. See Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 n.10 (1986). "Facts that could alter the outcome are 'material,' and disputes are 'genuine' if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct." Horowitz v. Fed. Kemper Life Assurance Co., 57 F.3d 300, 302 n.1 (3d Cir. 1995) (internal citations omitted). If the moving party has demonstrated an absence of material fact, the nonmoving party then "must come forward with 'specific facts showing that there is a genuine issue for trial.'" Matsushita, 475 U.S. at 587 (quoting Fed. R. Civ. P. 56(e)). The court will "view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion." Pa. Coal Ass'n v. Babbitt, 63 F.3d 231, 236 (3d Cir. 1995). The mere existence of some evidence in support of the nonmoving party, however, will not be sufficient for denial of a motion for summary judgment; there must be enough evidence to enable a jury reasonably to find for the nonmoving party on that issue. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 (1986). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law.

See Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986).

IV. DISCUSSION

A. Anticipation

Defendant contends that the asserted claims of the Sullivan patents are invalid as anticipated by U.S. Patent No. 4,431,193 to Nesbitt ("Nesbitt"). (D.I. 216 at 23-29) Defendant concedes that Nesbitt, standing alone, does not anticipate the asserted claims because it does not disclose: (1) the use of polyurethane as the outer cover layer material; or (2) the use of blends of ionomers in the inner cover layer. (Id. at 23) However, defendant asserts that Nesbitt anticipates the asserted claims because it incorporates by reference Molitor '637, which teaches these missing limitations. (Id.)

1. Incorporation by Reference

a. Standard

Proving a patent invalid by anticipation "requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." Advanced Display Sys. Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000) (citations omitted).

> Material not explicitly contained in the single, prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document. Incorporation by reference provides a method for integrating material from various documents into a host document . . . by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein.

Id. (citations omitted). Incorporation by reference requires a statement "clearly identifying the subject matter which is incorporated and where it is to be found." In re

Seversky, 474 F.2d 671, 674 (C.C.P.A. 1973). "[A] mere reference to another application, or patent, or publication is not an incorporation of anything contained therein. . . ." Id.

Put another way, the host document "must cite the material in a manner that makes clear that it is effectively part of the host document as if it were explicitly contained therein." Advanced Display Sys., 212 F.2d at 1282. It must, therefore, both (1) "identify with detailed particularity what specific material it incorporates"; and (2) "clearly indicate where that material is found in the various documents." Id. (citations omitted). While anticipation is a question of fact, the question of whether and to what extent material has been incorporated by reference into a document is a question of law. Id. at 1283. "[T]he standard of one reasonably skilled in the art should be used to determine whether the host document describes the material to be incorporated by reference with sufficient particularity." Id.

b. Analysis

Nesbitt discloses a three-piece golf ball having a core, a hard inner layer made of an ionomer resin, and a relatively soft outer layer made of ionomer resin. (D.I. 216 at 23) The relevant passage from Nesbitt states:

> The inner, intermediate, or first layer or ply 14 and the outer cover, second layer or ply 16 or either of the layers may be cellular when formed of a foamed natural or synthetic polymeric material. **Polymeric materials are preferabl[e] such as ionomer resins which are foamable**. Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 **which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16** for the golf ball of this invention.

(Col. 3, ll. 51-61) (emphasis added) Nesbitt proceeds to state that the inner layer may

be "preferably partially or only slightly foamed," the outer layer "may be foamed to a greater degree" than the inner layer, and that "the degree of foaming of one or the other or both layers may be altered to provide a variation in the coefficient of restitution of the golf ball." (Col. 3, ll. 62-68; col. 4, ll. 7-11)

The parties do not dispute that polyurethane is not an ionomer resin. Molitor '637 undisputedly discloses polyurethane in addition to many other possible choices of foamable cover materials, such as vinyl resins, acrylic resins, balata, and several types of polyolefins, as well as mixtures of these resins. (D.I. 205, ex. 3 at ¶ 102; Molitor '637, col. 5, ll. 33-55[6]) Many, if not most, of these resins are, unlike polyurethane, ionomer resins.

Defendant asserts that Nesbitt meets the Federal Circuit's standard iterated in Applied Display Systems because it: (1) identifies Molitor '637 by its serial number; (2) directs attention to the specific subject matter of "a number of foamable cover layer materials" that is incorporated into Nesbitt; and (3) "provides explicit instructions

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[6]"Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name 'Noryl.' This list is not meant to be limiting or exhaustive, but merely illustrates the wide range of polymeric materials which may be employed in the present invention. Mixtures of the above described material may also be used."

regarding the use of these foamable compositions as the cover layers in his two-piece ball." (D.I. 205 at 5) Plaintiff argues that Nesbitt does not specify, let alone with "detailed particularity," the use of polyurethane or ionomer blends by Molitor '637, nor does it "clearly indicate" where Molitor '637 discusses polyurethane or ionomer blends. (D.I. 242 at 5, 8)

The court agrees with plaintiff. There is no dispute that Molitor '637 discloses – in its text and examples – resins that are both ionomers and nonionic resins.[7] Nesbitt does not point to, or otherwise specify, the incorporation of polyurethane from Molitor '637. Nesbitt does not point to, or otherwise specify, the use of a blend of two ionomer resins as a cover layer, as disclosed in Molitor '637. Nor does Nesbitt point to any particular text or example of Molitor '637 which would tend to bridge these gaps. Moreover, although not specifically limited to ionomer resins, the reference to Molitor '637 occurred immediately following the statement that foamable ionomer resins are preferred. The court finds that Molitor '637 is mentioned in Nesbitt to identify examples of suitable resins, preferably ionomer resins, and not to specifically incorporate polyurethane.

The cases cited by defendant do not contradict the court's finding. (D.I. 205 at 4) In In re Voss, 557 F.2d 812 (C.C.P.A. 1977), the Court of Customs and Patent Appeals examined the effect of the following language:

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[7]Although the relevant passage from Molitor '637 (supra n.6) potentially encompasses hundreds of resins, examples 1-7 of Molitor '637 disclose only one ionomer resin composition, a blend of Surlyn® 1605 and Surlyn® 1557. Nevertheless, Nesbitt does not point to, or otherwise specify, the incorporation of this ionomer resin composition from Molitor '637.

> A glass-ceramic material is originally formed as a glass which is then phase separated, by a controlled uniform devitrification throughout, to develop a fine crystalline structure within a glassy matrix, the material thus produced having physical properties materially different from the parent glass and more nearly characteristic of a conventional crystalline ceramic material. Reference is made to United States Patent No. 2,920,971, granted to S.D. Stookey, for a general discussion of glass-ceramic materials and their production.

557 F.2d at 815-16. Finding that an incorporation by reference had been effected, the court stated that

> [g]lass-ceramic materials are merely starting materials for appellant's strengthening process. Rather than include in his application a detailed discussion of how to prepare such **known starting materials**, appellant, for economy, referred the skilled artisan to Stookey '971.

Id. at 817 (emphasis added). Defendant in this case assimilates the language of incorporation used in Nesbitt to the cited language of In re Voss. (D.I. 216 at 24) Nesbitt, however, does not contain the level of detail found in the patent application in Voss, nor does it attempt to incorporate Molitor '637 for the purpose of exemplifying "known starting materials" for an improved process, as in that case.

Similarly, where the material sought to be incorporated is a known preparation method, a slightly less detailed disclosure may suffice where an intent to incorporate a specific aspect of the reference is demonstrated. Relying on In re Voss, the Federal Circuit in its non-precedential opinion of Southern Clay Products, Inc. v. United Catalysts, Inc., 43 Fed.Appx. 379, 384 (Fed. Cir. 2002), found the following disclosure sufficient to incorporate the bond-breaking techniques described:

> Exemplary of **commonly employed** physical or comminuting techniques for breaking the bonds between the colloidal particles in a clay particle aggregate are those techniques disclosed in United States Pat. Nos. Re. 25,965; 3,253,791; 3,307,790; and 3,348,778 [Cohn]. Generally speaking, the techniques disclosed in these patents effect some type of grinding or comminuting either by shear or abrasion so as to break the bonds in the clay

aggregate particle and thus form several colloidal particles therefrom.

(U.S. Patent No. 3,951,850 ("Clocker") col. 1, ll. 46-55) (emphasis added) "By citing to and specifically identifying the bond-breaking techniques discussed by Cohn, Clocker has demonstrated the intent to make that information part of the specification." Id. (finding asserted claims anticipated by Clocker patent). In the present case, no specific resin, such as polyurethane, is identified by the passage in Nesbitt, nor is the resin employed as a starting material, as opposed to an essential component of one or both the inner and outer cover layers of the ball.

Finally, defendant relies on In re Hughes, 550 F.2d 1273 (C.C.P.A. 1977), in which the Court of Customs and Patent Appeals found that the following passage effectuated an incorporation by reference:

> Copending application Ser. No. 131,108, filed Aug. 14, 1961 by Jack Hurst and Harry D. Anspon describes the preparation of aqueous dispersions of water-insoluble, self-emulsifiable ethylene polymers containing pendent carboxylate salt groups which can be suitably employed in the process of this invention. As described therein, water-insoluble, but self-emulsifiable ethylene polymers containing pendent carboxylate salt groups are prepared by the hydrolysis in an aqueous medium of the acrylate groups of a thermoplastic ethylene-alkyl acrylate inter-polymer employing elevated temperatures, a metallic base, and, optionally, a nitrogenous base to produce a stable aqueous dispersion of the ethylene polymer. Reference is made to application Ser. No. 131,108 for complete descriptions of methods of preparing aqueous polymeric dispersions applicable in the hereinafter described invention.

Id. at 1274-75. Again, despite similarities between the final sentence of this passage and the statement of incorporation in Nesbitt, the patent application in Hughes clearly contains a superior level of detail to that present in Nesbitt. Moreover, while the passage in Hughes specifically identified the subject matter (the hydrolysis reaction) to

be incorporated,[8] Nesbitt does not specify any particular resin disclosed in Molitor '637.

For the aforementioned reasons, the court finds that Nesbitt does not describe the use of polyurethane or blends of ionomer resins in Molitor '637 with sufficient particularity to effectuate an incorporation by reference of those features. Because the asserted claims require both limitations, Nesbitt does not anticipate as a matter of law.[9] See, gen., In re Saunders, 444 F.2d 599, 603 (C.C.P.A. 1971) (disclosure of siloxane surfactant formula and statement that "[t]he above-described siloxane-oxlkylene block copolymers can be prepared in accordance with the procedures described and claimed in the copending application of D.L. Bailey and F.M. O'Connor, Serial No. 417,935," found to convey to persons of skill in the art only that "Bailey taught now to make surfactants of this general type" and would not expressly indicate that Bailey's other compounds could also be employed) (finding pending claims not anticipated by the purported combination reference); see also Zenon Environ., Inc. v. U.S. Filter Corp., Nos. Civ. A. 06-1266 and 06-1267, 2007 WL 3275025, *7-9 (Fed. Cir. 2007) (finding that the following statement did not incorporate by reference the entire disclosure of the prior art reference: "The vertical skein is not the subject matter of this invention and any prior art vertical skein may be used. Further details relating to the construction and

[8]The Hughes court noted that the specification "does not purport to provide a complete description of the hydrolysis reaction. Rather, [it] incorporates by reference application Ser. No. 131,108 for complete descriptions of these methods." 550 F.2d at 1276 (internal quotations and parentheses omitted).

[9]The court respectfully disagrees with the conclusion of the PTO, which has found that Nesbitt incorporates by reference Molitor '637 "[s]ince the language in Nesbitt for incorporation by reference is virtually identical to the language used in In re Hughes and In re Voss." (D.I. 328 at 25)

deployment of a most preferred skein are found in the parent U.S. Pat. No. 5,639,373, and in Ser. No. 08/690,045, the relevant disclosures of each of which are included by reference thereto as if fully set forth herein."); Telecordia Techs., Inc. v. Lucent Techs., Inc., Nos. Civ. A. 04-875 & 04-876, 2007 WL 1295532, *11-13 (finding statement "[f]or broadband services previous contributions have indicated that packet-mode techniques are a way to achieve flexibility at rates lower than the broadband channel rate (T1D1.1/85-113, T1D1.1/85-149)," accompanied by statement of improvement regarding the present invention, did not include the specific subject matter to be incorporated) (granting summary judgment of no anticipation). The court, therefore, denies defendant's motion for partial summary judgment that Nesbitt incorporates Molitor '637 by reference (D.I. 201). To the extent each is premised on Nesbitt, the court grants plaintiff's motion for summary judgment of no anticipation (D.I. 200) and denies defendant's motion for summary judgment of invalidity (D.I. 215).

2. Inherency

Plaintiff seeks a judgment that neither Nesbitt nor U.S. Patent No. 5,314,187 to Proudfit ("Pruodfit '187") anticipates the asserted claims that require a Shore D hardness of 64 of less, because neither reference discloses, expressly or inherently, a Shore D hardness for the outer cover layer.[10]

a. Law of anticipation based upon inherency

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. See Key Phar. v. Hercon Labs. Corp.,

[10]Defendant does not move for summary judgment of invalidity on this issue. (D.I.s 215, 216)

161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art. See id. A finding of anticipation will invalidate the patent. See Applied Med. Resources Corp. v. U.S. Surgical Corp., 147 F.3d 1374, 1378 (Fed. Cir. 1998). Issued patents are presumed valid, and the "underlying determination of invalidity . . . must be predicated on facts established by clear and convincing evidence." Rockwell Int'l Corp. v. United States, 147 F.3d 1358, 1362 (Fed. Cir. 1998) (citations omitted).

A prior art reference may anticipate without explicitly disclosing a feature of the claimed invention if that missing characteristic is inherently present in the single anticipating reference. See Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Federal Circuit has explained that an inherent limitation is one that is "necessarily present" and not one that may be established by "probabilities or possibilities." See id. at 1268-69. That is, "'[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" Id. at 1269 (emphasis in original) (citations omitted).

b. On the ball Shore-D hardness of Nesbitt and Proudfit '187

In its memorandum order of the same date, the court has construed "cover layer having a Shore D hardness" to describe a hardness measurement taken "on the ball." There is no dispute that Nesbitt discloses the use of Surlyn® 1855 resin as the outer cover layer of the ball, which material has a Shore D hardness of 55 as measured "off the ball." (Nesbitt, col. 3, ll. 34-44; D.I. 238, ex. 8 at 146:5-14; D.I. 202 at 15) There is no indication, however, that this measurement invariably correlates to an "on the ball"

measurement of less than 64.[11]

Defendant proffers the declaration of William J. MacKnight, who was retained by defendant to oversee the preparation and testing of several golf balls and test for Shore D hardness of the outer layer ("the MacKnight testing").[12] (D.I. 238 at 15, citing D.I. 217 [sic], ex. 30 at ¶ 33) According to defendant, Dr. MacKnight reviewed golf balls constructed with a core as described by Nesbitt, ionomer-blend inner cover layers disclosed in Molitor '637, and polyurethane outer layers as disclosed in Molitor '637; the resulting "on the ball" Shore D hardness was 62. (D.I. 217, ex. 30 at ¶ 33, results for ball 1)

The court previously has found that Nesbitt does not specifically incorporate Molitor '673's disclosure of an ionomer-blend inner cover layer. The balls reviewed by Dr. MacKnight, therefore, were neither completely representative of Nesbitt, nor were

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[11]Acushnet's expert, Dr. Robert Statz, testified that hardness values "can be different between a plaque measurement and an on the ball measurement" provided thickness is taken into account. (D.I. 203, ex. 8 at 301:7-11) Mr. Jeffrey Dalton, Acushnet's Rule 30(b)(6) witness, testified that "a number of things come into play in the difference between Shore D on the ball versus on the slab or on a test specimen," such as thickness, as "you also have an influence of what's underneath the layer that you're trying to measure[.]" (Id., ex. 9 at 59:13-25) Another Acushnet expert, Dr. MacKnight, testified that "Shore hardness measurements don't measure [a] fundamental property of the material, and so there isn't generally a theoretical method of predicting what the values will be." (Id., ex. 1 at 93:23-94:1) Finally, U.S. Patent No. 6,960,630, assigned to Acushnet, states that "[h]ardness, when measured directly on a golf ball (or other spherical surface) is a completely different measurement and, therefore, results in a different hardness value . . . the two measurement techniques are not linearly related and, therefore, one hardness value cannot easily be correlated to the other." (Id., ex. 7 at col. 10, ll. 14-24)

[12]Although the court, in a memorandum order issued this date, has granted plaintiff's motion to exclude the MacKnight testing, the court will address the merits of defendant's contentions for purposes of this discussion.

they completely representative of Proudfit '187. The court finds the fact that these balls ostensibly had Shore D hardness values of less than 64 insufficient to demonstrate that balls made according to the disclosure of Nesbitt independently, or Proudfit '187 independently, invariably had Shore D hardness values of less than 64. See Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991) (extrinsic evidence used to fill a gap in a reference "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill") (citations omitted); Wesley Jennsen Corp. v. Bausch & Lomb, Inc., 209 F. Supp. 2d 348, 393 (D. Del. 2002) (samples prepared to demonstrate inherency made with components of multiple references were insufficient to carry defendant's burden on inherency, as the substitutions would not be recognized by persons of ordinary skill as necessarily present in one prior art reference).

Defendant places much emphasis on the fact that plaintiff did not provide its own testing to controvert Dr. MacKnight's report. (D.I. 238 at 15) This, however, does not alter the fact that defendant's hybrid balls do not represent any embodiment of any prior art reference. At best, defendant's evidence demonstrates that Nesbitt and/or Proudfit '187 possibly has the properties at issue; absent more, a reasonable jury could not find either reference anticipatory. See Continental Can Co. USA, 948 F.2d at 1269. Plaintiff's motion for summary judgment of no anticipation (D.I. 200) is granted on this ground.

c. Proudfit '187 and the Wilson Ultra Tour Balata ball

Plaintiff seeks a judgment that Proudfit '187 and the Wilson Ultra Tour Balata

golf ball (the "Wilson Balata," which defendant asserts embodies Proudfit '187), do not anticipate claims 1 or 2 of the '130 patent[13] because neither discloses a golf ball having an outer cover layer having a Shore D hardness of 64 or less and a blend of low-acid ionomers in the inner cover layer.[14] (D.I. 202 at 19-20)

Defendant asserts that the Wilson Balata available in 1993 used the outer cover layer disclosed in Table 7 of Proudfit '187. (D.I. 238 at 17) In support, defendant presents the declaration of Mr. Proudfit, obtained specifically for purposes of this motion practice. Mr. Proudfit has declared that Proudfit '187 discloses an inner cover layer composed of a blend of Surlyn® 8940 and Surlyn® 9910, both low-acid ionomers. (Id., ex. 5 at ¶ 5) Mr. Proudfit also declares that "[t]he outer cover layer of the [Wilson Balata] ball on sale in 1993 was the composition set forth in Table 7 of the [Proudfit] '187 patent." (Id. at ¶ 6) Defendant has produced a document detailing defendant's in-house testing of the Wilson Balata in 1993, which states that the cover layer had a "primary component" of c-polybutadiene and an "other polymer" of "synthetic balata." (D.I. 238, ex. 10 at AC0072945) Defendant found the "hardness" of the ball to be 52.

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[13]Unlike the remainder of the Sullivan patent claims at issue, claims 1 and 2 of the '130 patent do not specifically require polyurethane in the outer cover formulation. Independent claim 1 of the '130 patent reads:

> 1. A golf ball comprising: a core; an inner cover layer having a Shore D hardness of 60 or more molded on said core, the inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and an outer cover layer having a Shore D hardness of 64 or less molded on said inner cover layer, said outer cover layer comprising a relatively soft polymeric material selected from the group consisting of non-ionomeric thermoplastic and thermosetting elastomers.

[14]Proudfit '187 does not expressly disclose a Shore D hardness value for its various embodiments.

(Id.)

Mr. Proudfit, in a 1993 declaration to the PTO, stated that "[t]he balata layer of the Ultra Tour Balata Ball also includes polybutadiene and the other ingredients which are listed in Table 7 of the application in addition to synthetic balata." (D.I. 216, ex/ 47 at ¶ 14) In Mr. Proudfit's 2007 declaration, he states that the Wilson Balata comprised only the composition of Table 7.[15] Neither party has deposed Mr. Proudfit in this case, because Mr. Proudfit was not listed in defendant's initial disclosures or interrogatory responses as a potential witness in this case, nor did defendant produce his declaration until after the close of fact and expert discovery. Given the inconsistencies between Mr. Proudfit's 1993 and 2007 declarations, and defendant's untimely disclosure of Mr. Proudfit as a critical witness to the anticipation defense asserted by defendant in this regard, the court declines to consider Mr. Proudfit's 2007 declaration amongst defendant's evidence regarding anticipation on summary judgment.

Proudfit '187 and the Wilson Balata are discrete, separate items of prior art for purposes of anticipation. There is no dispute that the two limitations in question are not explicitly present within the four corners of Proudfit '187. If the Surlyn® 8940 and Surlyn® 9910 resins disclosed in Proudfit '187 (Table 6) are, in fact, low-acid ionomers, defendant could introduce this evidence at trial through one of its other witnesses. Defendant, however, cannot meet its burden on inherency with respect to the outer cover layer. Notwithstanding the fact that Mr. Proudfit identified components of the Wilson Balata outer cover layer not present in Proudfit '187 Table 7 (balata and

[15]It is unclear whether "synthetic balata" comprises the ingredients listed in Table 7.

synthetic balata), defendant's only evidence regarding Shore D hardness, the allegedly "inherent" limitation in question, is its 1993 testing document, which merely records a "hardness" of 52 without mention as to whether this was recorded on the ball or off the ball.[16] Therefore, no comparison to claims 1 and 2 of the '130 patent can readily be made. In sum, defendant's inherency theory is too attenuated and unsubstantiated at several steps to prove that Proudfit '187 anticipates claims 1 and 2 of the '130 patent. Plaintiff's motion for summary judgment of no anticipation (D.I. 200) is granted on this ground.

B. Obviousness

Before the court is defendant's motion for summary judgment of invalidity. (D.I. 215) With respect to obviousness, defendant asserts that Proudfit '187 and Nesbitt disclose each limitation of the asserted claims except polyurethane for the outer cover layer, which is disclosed in Molitor '751, Wu, and Molitor '637. Plaintiff argues that defendant has not made a prima facie case of obviousness because none of these references disclose, explicitly or implicity, an outer cover layer with a Shore D hardness less than 64, and an inner cover layer with a Shore D hardness more than 60.[17]

By its claim construction order of the same date, the court has determined that Shore D measurements of the patented balls must be made "on the ball." Under the

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[16]There is also no indication of whether this value represents the result from a single test or multiple tests and, if the latter, in what manner the results are reported (mean or median). Such information is critical in determining whether the evidence could support a determination that the claimed Shore D hardness values are always or "necessarily" present in a ball disclosed in Proudfit '187.

[17]Plaintiff has not brought its own motion for summary judgment that the Sullivan patents are not invalid as obvious on these grounds.

court's construction, it follows that the patented ball must be constructed before the Shore D value of the outer cover layer can be measured. Indeed, plaintiff has presented evidence that the composition of the core and inner layers of the golf ball have some bearing on a Shore D measurement taken on the ball. (See supra n.12)

As discussed previously in the context of anticipation, the court finds that neither Nesbitt nor Proudfit '187 inherently discloses an outer cover layer with a Shore D hardness of 64 or less. Neither Molitor '751, Wu, or Molitor '637 expressly provide this limitation and, to prove obviousness, it is not enough for defendant to demonstrate that this limitation is inherently present in Molitor '751, Wu, or Molitor '637. Even if one of the asserted prior art references inherently discloses a Shore D hardness of 64 or less **for the ball(s) of that reference**, that is no indication of the Shore D hardness which a person of skill in the art would expect **for the patented balls**, i.e., the combination of elements from Nesbitt or Proudfit '187 and Molitor '751, Wu, or Molitor '637. Defendant must put forward evidence that tends to demonstrate that persons of ordinary skill in the art had knowledge that combining these references would result in an "on the ball" Shore D hardness of less than 64, and some motivation to combine the references to provide this result.[18] See In re Rijckaert, 9 F.3d 1531, 1534 (Fed. Cir. 1993) ("That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown. . . Such a retrospective view of inherency is not a substitute for some

[18]This should be distinguished from a general motivation to combine these various pieces of art relating to golf balls. There is no indication, in the prior art or elsewhere, of an "an apparent reason to combine the known elements in the fashion claimed by the patent at issue." See KSR Intern. Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). Nor is any reasonable expectation of success indicated.

teaching or motivation supporting an obviousness rejection.") (citations omitted).

With respect to the disclosures of the asserted references, defendant puts forward the following: (1) Molitor '751 discloses a "Shore C" hardness of 72-76 for its preferred cover layer, which is equivalent to an on the ball Shore D value of less than 64 when this cover layer is combined with either (a) the core and inner layer of Proudfit '187, as confirmed by the MacKnight testing, or (b) the core and inner layer of Nesbitt, as confirmed by the MacKnight testing; and (2) balls made with both the core and inner layer of (a) Proudfit '187 or (b) Nesbitt and either the outer cover layer of (c) Wu or (d) Molitor '637 were all measured to have on the ball Shore D hardness values under 64. Defendant's positions are all predicated on the MacKnight testing, that is, after-manufacture, on the ball testing of golf balls containing the stated combinations of elements.

Again, even assuming that the MacKnight test results were accurate, there is no indication that Dr. MacKnight, a person of skill in thermoplastics, knew or appreciated that making balls of these combinations of elements (i.e., the patented balls) would have outer cover layer Shore D values less than 64 prior to making and testing them.[19]

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[19]Defendant asserts that "Dr. MacKnight's testing is instructive of what a person of ordinary skill in the art would **be able to readily ascertain** as to the 'on the ball' hardness of the Molitor '637 polyurethane. A person of ordinary skill in the art would easily be able to make the Proudfit ball, replacing the outer cover layer with the Molitor '637 polyurethane, and find that the Shore D hardness 'on the ball' is 59.4, which is less than 64, as Dr. MacKnight did." (D.I. 265 at 13) (emphasis added) Callaway's expert, Dr. Risen, testified that, if he wanted to know what the Shore D of a ball made in a particular way was, "[he]'d make the ball and measure it." (D.I. 265, ex. 57 at 135:10-136:8) What a person of skill would be able to readily ascertain upon completion of this task is not equivalent to a motivation to combine to achieve a desired result, and a reasonable expectation of success in doing so; such evidence is lacking on this record.

Similarly, there is no indication that persons of skill in the art, given the claimed combination of core, inner layer, and outer cover layer features and materials pieced together from the prior art, would have known or expected the resultant ball to have Shore D values less than 64 as claimed.[20]

The closest evidence in this regard is defendant's assertion that the Shore C hardness disclosed in Molitor '751 (between 72 and 76) "is certainly below 64 on the Shore D scale" according to the charts of record. (D.I. 216 at 19-20, 30) One chart provided is the ASTM standard (D.I. 217, ex. 27); a second chart was submitted during prosecution of the '873 patent for the purpose of approximating Shore D hardness from Shore C values. (Id., ex. 55 at 3) Plaintiff underscores that each chart plainly states that it cannot be used as a conversion chart. (D.I. 244 at 23-24) According to the MacKnight testing, a golf ball prepared with a core and inner cover layer described by Proudfit '187, and a cover material harder than that described by Molitor '751, was asserted to have an "on the ball" Shore D hardness of 51.2. (D.I. 217, ex. 30 at ¶¶ 25,

[20]The court respectfully disagrees with the conclusion of the PTO on obviousness. Claim 1 of the '130 patent stands rejected as obvious in view of Nesbitt and Molitor '637, which is mentioned in Nesbitt (presumptively providing motivation to combine). The examiner has applied the following logic to find that the limitation "a Shore D hardness of 60 or more molded on said core" is disclosed by this combination: (1) Nesbitt discloses an inner cover layer of "molded hard" resin such as Surlyn® 1605, now designated as Surlyn® 8940; and (2) Surlyn® 8940 has a Shore D hardness of 65. (D.I. 328 at 40) Similarly, the examiner has reasoned that the "Shore D hardness of 64 or less molded on said inner cover layer" is disclosed by the asserted combination of prior art since: (1) Nesbitt references Molitor '637 with respect to the outer cover layer; (2) Molitor '637 discloses a polyurethane outer layer identified as Estane® 58133; (3) Estane 58133 has a Shore D hardness of 55, as demonstrated by an "Estane® Thermoplastic Product Data Sheet." (Id.) There is no indication that either resource utilized by the PTO in determining Shore D hardness reflected on the ball, as compared to plaque, testing of that property.

33) However, Dr. MacKnight testified that a straight conversion would be "dangerous," and also admitted that a comparative estimate of Shore D based on Shore C hardness "probably wouldn't be terribly inaccurate." (Id., ex. 2 at 114:4-21) Plaintiff has also adduced evidence which tends to demonstrate that the advantages conferred by utilizing the particular materials, hardnesses, and thicknesses of different cover layers is potentially unpredictable. (D.I. 244 at 20, citing D.I. 217, ex. 5 at 36:22-37:6, id., ex. 6 at 344:10-24)

In addition to the lack of direct evidence on this point introduced by defendant, plaintiff's evidence regarding the correlation tables suffices to create a genuine issue of material fact as to whether a person of ordinary skill in the art would have had a motivation to combine the claimed elements to achieve a Shore D hardness of less than 64, and a reasonable expectation of success in doing so. See Gilette Co. v. S.C. Johnson & Son, Inc., 919 F.2d 720, 724 (Fed. Cir. 1990) ("An analysis of obviousness of a claimed invention must include consideration of the results achieved by that combination."); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1383 n.6 (Fed. Cir. 1986) (stating that courts may not "[f]ocus[ ] on the obviousness of substitutions or differences rather than the invention as a whole"). The court finds, therefore, that summary judgment of invalidity is inappropriate at this stage. Defendant's motion (D.I. 215) is denied.

C. Breach of Contract

The parties have each moved for summary judgment on the breach of contract issue. (D.I. 197, 213)

1. The parties are bound by the Agreement

As a threshold matter, defendant asserts that plaintiff is not a party to the Agreement and, therefore, defendant was not required to follow the Agreement with respect to its patent disputes with plaintiff. (D.I. 214 at 8-9, D.I. 239 at 14) The Agreement was entered into between Spalding and defendant. Section 15 of the Agreement plainly provides that "[the Agreement] is binding upon the parties hereto, their affiliated, related and controlled companies, as well as their representatives and the **successors**, transferees and assigns of substantially all of their respective Golf Ball Businesses."[21] (D.I. 199, ex. 1 at § 15) Defendant does not dispute that Spalding's golf ball business became an independent company that was acquired by plaintiff. (D.I. 214 at 4)

In addition, in 1995, defendant sought (and obtained) a mediation before Magistrate Judge Thynge of this court, and represented to Judge Thynge at the outset that the Agreement provided that plaintiff (not Spalding) and defendant should mediate the present dispute. (D.I. 199, ex. 4) Defendant's general counsel has previously declared to this court that he was present at this mediation "between Acushnet and Callaway Golf Company" pursuant to sections 19.5 and 19.6 of the Agreement. (D.I. 24, ¶¶ 4, 5) Finally, defendant has invoked section 19.2 of the Agreement to request information from plaintiff regarding its damages theories. (D.I. 199, exs. 10, 11)[22]

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[21]"Golf Ball Business" is defined as "[t]he business of and the technology used in making, using, and selling golf balls in the United States and foreign countries as participated in by the parties, their affiliates, subsidiaries or related companies." (D.I. 199, § 1.2)

[22]Defendant stated that it would, "of course treat th[at] information as confidential pursuant to paragraph 19.4 of the [A]greement." (D.I. 199, ex. 10)

Defendant engaged in two mediation proceedings with plaintiff, as prescribed by the Agreement.

The court finds that plaintiff is a "successor" as described by the Agreement; the Agreement, therefore, governs the dealings between plaintiff and defendant.[23] Defendant has performed under the Agreement under this understanding,[24] and has not adduced sufficient evidence to create a genuine issue of material fact on this issue.

2. The PTO's findings are not controlling

Defendant asserts that the PTO has considered, and rejected, plaintiff's interpretation of the Agreement. (D.I. 214 at 6-7) On April 13, 2006, plaintiff filed a petition with the PTO to vacate the reexamination filed by defendant in view of the Agreement. (Id., ex. D) The PTO declined, on jurisdictional grounds, "to make a determination regarding the validity and applicability of [the Agreement], or to make any findings regarding the facts alleged in [the] patent owner's petition or the third party requester's opposition to [the] patent owner's petition." (Id. at 4, n.3) Assuming plaintiff's rendition of the facts were accurate and the Agreement to be valid and

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[23]Thatcher v. Kohl's Dept. Stores, Inc., 397 F.3d 1370, 1373 (Fed. Cir. 2005), cited by defendant, is distinguishable on its facts. In Thatcher, the consent judgment contained "successors-in-interest" language when discussing the obligations of one party, but not the other. Id. at 1372-73. Accordingly, as no one other than the named party was expressly given the right to proceed with a contempt action to enforce the judgment pursuant to its terms, the Federal Circuit found this to be the "functional equivalent of the parties' express intent to exclude language of assignment." Id. at 1375 (holding that named party and its assignee "must live with the consequence of failing to include similar language of assignability here").

[24]Ironically, defendant contemporaneously asserts that plaintiff's interpretation of the Agreement "runs to a potentially infinite array of patents, held by multiple **as yet unknown** companies." (D.I. 264 at 16) (emphasis added)

enforceable, the PTO dismissed plaintiff's request on the following grounds: (1) plaintiff cited no authority for the proposition that private parties may abrogate the PTO's statutory jurisdiction to conduct and decide the merits of a request for inter partes reexamination; (2) "a contractual provision preventing a party from seeking reexamination would be void as contrary to public policy" allowing licensees to challenge the validity of patents; (3) the Agreement was executed prior to the enactment of the statute authorizing inter partes reexamination, "[t]hus it was not even possible for [the Agreement] to address preventing a party to the [A]greement from filing such a request for reexamination"; (4) there was no indication that the reexamination was ordered contrary to a statutory prohibition or due to clerical error; and (5) Congress did not provide for an "estoppel" arising out of a settlement or other contractual agreement between parties. (Id. at 4-5) The PTO concluded that the reexamination must proceed in the public interest of resolving the substantial new question of patentability. (Id. at 6)

Respectfully, the court owes no deference to the PTO's interpretation of the legal effect of the Agreement or, more generally, the legality of a provision that purports to prevent parties from filing inter partes reexaminations. The reexamination at issue having been filed, and a substantial new question of patentability recognized, the PTO was clearly within its jurisdiction to dismiss plaintiff's request to halt the proceedings. It does not follow, however, that defendant was not in breach when it filed its inter partes reexamination request in the first instance.

3. The Agreement prohibits any procedures not specified therein

The Agreement expressly provides that "[a]ny dispute arising out of or relating to

patents" be resolved by the procedures set forth therein, which are "the sole and exclusive procedure[s] for the resolution of any such dispute." (D.I. 199, ex. 1 at § 19.1) These procedures included mediation and litigation in this district;[25] reexamination proceedings are not listed as a possible alternative and, therefore, are precluded as possible remedies to any disputes involving the Sullivan patents.[26] (Id. at §§ 19.5-19.7) There is no need for the court to determine whether an inter partes reexamination is a "legal proceeding," insofar as defendant breached the Agreement in any event: If it is a legal proceeding, defendant breached by filing a legal proceeding in the wrong forum; if it is not, defendant breached because the Agreement only allows for legal proceedings.[27]

The fact that inter partes reeexamination proceedings were not introduced by

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[25]Defendant's emphasis on the "permissive" language regarding the Agreement's provision that either party "**may** initiate legal proceedings but only in the United States District Court for the District of Delaware, and no other" is misplaced. (D.I. 199 at § 19.7; D.I. 239 at 5) (emphasis added) That the parties did not seek to mandate expensive and time-consuming patent litigation has no bearing on whether litigation is the exclusive, post-mediation remedy.

[26]Indeed, the fact that defendant filed its reexamination requests after two failed mediation attempts, and requested a stay of this litigation pending the outcome of the reexaminations, is highly inconsistent with defendant's assertion that an inter partes reexamination is not a dispute resolution process.

[27]The Federal Circuit has found that an ex parte reexamination may qualify as "other litigation" for purposes of laches. See Vaupel Textilmaschinen KG v. Meccanica Euro Italia APA, 944 F.2d 870, 876-77 (Fed. Cir. 1991). Although inter partes reexaminations are more adversarial by their nature and, in fact, were enacted to reduce patent litigation in district courts (145 CONG. REC. E1789-E1790 (Aug. 5, 1999)), the Federal Circuit has pronounced, albeit in a factually distinguishable case, that it "do[es] not equate a request for administrative reexamination by the United States Patent and Trademark Office with filing a suit in a United States Court." See Joy Manufacturing Co. v. National Mine Svc. Co., 810 F.2d 1127, 1129 (Fed. Cir. 1987).

statute until three years after the Agreement was signed does not change the effect of the controlling language. Defendant asserts that, if the parties intended to exclude reexaminations, they would have specifically noted and excluded ex parte reexaminations as a possible remedy.[28] The court disagrees. The Agreement excludes any other "proceedings" not initiated in this court. It, therefore, succeeds in "guard[ing] against the possibility of a change in law." (D.I. 239 at 12)

Finally, defendant asserts that it would run afoul of public policy to interpret the Agreement so as to prohibit the defendant's reexamination filings; if litigation is the only available forum, defendant asserts, then neither party would be able to: (1) "file a new patent adverse to the other's products"; (2) "file an interference with the PTO in the case that the other party filed for a new patent"; or (3) participate in a trademark opposition in the PTO." (D.I. 239 at 11) None of these circumstances, however, constitute a "dispute arising out of or relating to [issued] patents," as required by the Agreement.

Section 19.7 of the Agreement is akin to a forum selection clause; the parties have not contracted away their rights to contest the validity of each other's patents, but have agreed to do so before a court, rather than before the PTO. The parties' interests in adjudicating the validity of issued patents is not compromised.[29] The public interest is

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[28]A 2001 agreement between the parties specifically prohibits the filing of inter partes reexaminations. The court, however, declines to use a separate and later-executed contract to aid in its interpretation of the contract at issue.

[29]Defendant argued in its motion to stay the current litigation (pending completion of the reexaminations) that the court could benefit from the PTO's review of validity; however, the court is capable of resolving a broader spectrum of disputes than the PTO.

not compromised here, as the public is not a party to the Agreement, and other third parties may still challenge the validity of the parties' patents through reexamination. Absent a compelling reason not to honor the parties' choice of forum for their patent disputes,[30] the court concludes that, based upon the foregoing discussion, defendant violated the Agreement by filing the inter partes reexaminations to contest the validity of the Sullivan patents. Plaintiff's motion (D.I. 197), therefore, is granted; defendant's motion (D.I. 213) is denied.

V. CONCLUSION

For the foregoing reasons, plaintiff's motion for summary judgment of breach of contract (D.I. 197) is granted; plaintiff's motion for summary judgment of no anticipation (D.I. 200) is granted; defendant's motion for partial summary judgment regarding incorporation by reference (D.I. 201) is denied; defendant's motion for summary judgment of no breach of contract (D.I. 213) is denied; and defendant's motion for summary judgment of invalidity (D.I. 215) is denied. An appropriate order shall issue.

[30] Flex-Foot, Inc. v. CRP, Inc., 238 F.3d 1362, 1369 (Fed. Cir. 2001) ("[T]here is a strong public interest in settlement of patent litigation and that upholding the terms of a settlement encourages patent owners to agree to settlements – thus fostering judicial economy.") (citing Foster v. Hallco Mfg. Co., Inc., 947 F.2d 469, 477 (Fed. Cir. 1991)).

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CALLAWAY GOLF COMPANY,
Plaintiff,

vs.

ACUSHNET COMPANY,
Defendant.

Civil Action
No. 06-91 (SLR)

Hernando, Florida
Wednesday, April 11, 2007
Volume II of II

Videotaped Deposition of
R. DENNIS NESBITT,

The witness, was called for examination by counsel for the Defendant, pursuant to notice, commencing at 1:38 p.m. at the Best Western Citrus Hills Lodge, 350 East Norvell Bryant Highway, Hernando, Florida, before Patty A. Carlson, Certified Realtime Reporter and Notary Public, when were present on behalf of the respective parties:

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Nesbitt 33	(00615876 through -882, 8-16-78 test request, results, et cetera)	172
Nesbitt 34	(Bates No. C W 00615886 to -901 formulation composition X-09370-5, et cetera)	174
Nesbitt 35	(U.S. Patent No. 4,274,637)	189
Nesbitt 36	(U.S. Patent No. 4,674,751)	201
Nesbitt 37	(Bates No. C W 0303427 to -495 file history for Patent 4,431,193)	203
Nesbitt 38	(Bates No. C W 00512740 organizational chart)	211
Nesbitt 39	(Bates No. C W 00521703 to -53 series of documents)	214
Nesbitt 40	(U.S. Patent No. 3,989,586)	218
Nesbitt 41	(U.S. Patent No. 4,248,432)	219
Nesbitt 42	(Bates No. C W 00533615 9-29-97 document)	244
Nesbitt 43	(Bates No. C W 0282376 8-21-02 letter)	250

Q. -- is that correct?
A. Right.
Q. Why did you want to do that?
A. Because as Molitor said, it gives superior properties. It was the best ionomer at that time that gave the highest coefficient.
Q. When you say "coefficient" --
A. Of restitution, COR.
Q. And that's important because it makes the ball go further?
A. Further, yeah.
MR. ROSENTHAL: Objection, leading.
Q. In your 193 patent Mr. Rosenthal earlier referenced you to a paragraph that talked about the Molitor patent. Do you remember that?
A. I remember that.
Q. If somebody read that to themself and said to you, "Oh, you must have been referring to polyurethane as a potential outer cover material," what would you say to that?
A. No way.
MR. ROSENTHAL: Could you just give me a chance to --
THE WITNESS: You can --
MR. ROSENTHAL: I'm going to object to the

question. It calls for speculation and leading.

THE WITNESS: I already answered it, anyway.

Q. What would you say in response that statement?

MR. ROSENTHAL: Same objection.

A. It had nothing to do with polyurethane. I knew what the Molitor ball was. It was the same ball in the test. The, quote, 10-piece golf ball, was a foam Surlyn. That patent was a foam Surlyn patent. He might have thrown other stuff in it, which I didn't know; but it was a foamed ionomer two-piece.

Q. Mr. Rosenthal also talked about consulting fees and the amount that you have been paid since you left the employ of Spalding and have been a consultant for Top-Flite Golf. What did you do in return for that compensation? What have you been doing from '99 to 2006 for the company?

A. I continue doing what I was doing and best known for doing and that was working on experimental golf balls. I got several more patents based upon the work.

As I say, when I retired I worked -- I'm not sure if I worked four days a week and one week off, but I know I worked three days a week with two days off, and I had two months off. The next year it was two days a week that I worked and still had the two months off to

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors : Sullivan et al. Patent No. : 6,623,371
Control No. : 95/000,4445 Art Unit : 3993
Reexam Filed: March 3, 2009 Examiner : Jeffrey L. Gellner
Title : MULTI-LAYER GOLF BALL

Mail Stop "Inter Partes Reexam"
Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF JOHN CALABRIA PURSUANT TO 37 C.F.R. § 1.132

I, John Calabria, hereby declare under penalty of perjury that the following is true and correct:

1. My name is John Calabria. I am currently President of Double Eagle Consulting. I graduated from the University of Massachusetts with B.S. degrees in Zoology and Chemistry, and a Masters degree in Mechanical Engineering. I have attached a copy of my resume as Exhibit A to this Declaration.

2. I have worked for some of the leading companies within the golf industry for over 20 years, and I have several patents in my name related to the manufacture of golf balls. My company specializes in working on golf ball manufacturing processes, and finding better and more cost effective ways to make golf balls. In addition, I have previous experience as an expert witness in litigation conducted by several companies.

3. I have read U.S. 6,623,381 ("the '381 patent"). Claim 10 of the '381 patent recites "an outer cover layer molded on said inner cover layer, said outer cover layer comprising a relatively soft polymeric material selected from the group consisting of low flexural modulus ionomer resins and non-ionomeric resins."

4. The cover page of the '381 patent states that the '381 patent is related to a number of previously filed U.S. patent applications, the earliest of which is U.S. patent

application number 08/070,510, which was filed on June 1, 1993. I have compared the text of application number 08/070,510 to that of the '381 patent. With the exception of the claims, the text of application number 08/070,510 corresponds to the text of the '381 patent. Therefore, for the sake of convenience, I will refer simply to the text of the '381 patent throughout the remainder of my Declaration.

5. According to the text of the '381 patent, the particular material for the outer cover layer must "produce the playability and durability characteristics desired without adversely affecting the enhanced travel distance characteristic produced by the high acid ionomer resin composition [of the inner cover layer]."[1] The text of the '381 patent lists suitable materials for performing this function, including "a soft, relatively low modulus ionomer, ionomer blend or other non-ionomeric thermoplastic elastomer."[2] The '381 patent also provides numerous examples of specific ionomeric and non-ionomeric resins that would be suitable for use as the outer cover layer, including polyurethanes.

6. In my opinion, based upon my experience in the golf ball industry, a person of ordinary skill in the field of golf ball design and manufacture, as of June 1, 1993, would have understood from reading the text of the '381 patent that ionomer and non-ionomeric elastomer materials in general could be used as the outer cover layer of the golf ball. Such a person also would have understood that non-ionomeric thermoplastic elastomers, including the specific polyurethane polymers listed in the '381 patent, were merely examples of the larger classification of non-ionomeric elastomers to which the '381 patent was directed.

7. Both thermoset and thermoplastic polyurethanes are examples of non-ionomeric elastomers. Both were used in golf ball covers as of June 1, 1993, in the context of single layer covers. The choice between the use of thermoset and thermoplastic polyurethanes generally was driven by whatever manufacturing process a company was using at the time in its manufacturing facilities. Companies using injection molding machinery would

[1] The '381 patent, col. 17, lines 64-67.
[2] See, e.g., the '381 patent at col. 3, line 65 to col. 4, line 1 and col. 12, lines 14-18.

typically research and use thermoplastic polyurethane, because it was readily processed using existing equipment and the scrap could be remelted and reused. Companies using compression molding machinery would typically research and use thermoset polyurethane, because these materials lent themselves more readily to compression molding or casting techniques using open half shell molds. But, both thermoset and thermoplastic polyurethanes were known cover materials for golf balls. Therefore, a person of ordinary skill in the field of golf ball design and manufacturing, reading the '381 patent, would have recognized that both types of polyurethanes could be used as the outer cover layer of the golf ball described in the patent. Accordingly, this person would have recognized that the '381 patent described non-ionomeric elastomers generally, and non-ionomeric polyurethanes specifically, as part of its invention.

8. Another Sullivan patent, U.S. 6,495,633 ("the '633 patent") further demonstrates that persons of ordinary skill in the field of golf ball design and manufacture used the term "non-ionomeric thermoplastic elastomer" as a generic description of non-ionomeric elastomers. For example, at col. 25, lines 1-17, the '633 patent states:

> Other soft, relatively low modulus non-ionomeric thermoplastic elastomers may also be utilized to produce the outer cover layer as long as the non-ionomeric thermoplastic elastomers produce the playability and durability characteristics desired without adversely effecting [sic] the enhanced travel distance characteristic produced by the high acid ionomer resin composition. These include, but are not limited to, thermoplastic polyurethanes such as Texin thermoplastic polyurethanes from Mobay Chemical Co. and the Pellethane thermoplastic polyurethanes from Dow Chemical Co.; non-ionomeric thermoset polyurethanes including but not limited to those disclosed in U.S. Pat. No. 5,334,673; cross-linked metallocene catalyzed polyolefins; ionomer/rubber blends such as those in Spalding U.S. Pat. Nos. 4,986,545; 5,098,105 and 5,187,103; and Hytrel polyester elastomers from DuPont and Pebax polyesteramides from Elf Atochem S.A.

John Calabria Dated: 7/26/09

John Calabria

JOHN CALABRIA

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EDUCATION

MASTER OF SCIENCE - MECHANICAL ENGINEERING - 1976
BACHELOR OF SCIENCE - ZOOLOGY AND CHEMISTRY - 1972
University of Massachusetts, Amherst, MA

PROFESSIONAL EXPERIENCE

Double Eagle Consulting, LLC
741 Shefwood Drive
Easley, SC 29642

OWNER AND PRINCIPAL CONSULTANT – 2005 to Present

Engineering consultant to the golf industry working in the areas of materials, tooling, manufacturing improvements, product enhancements, equipment design and intellectual property issues. Able to take on a wide range of assignments based on 20+ years working for major golf ball companies.

- 2005 to present - Consultant for TaylorMade-adidas Golf on urethane materials, golf ball manufacturing processes and equipment, implementation of new golf ball products and rationalization of global supply chain.

- 2005 to 2007 – Completed two year engagement with Bridgestone Sports as an expert witness relative to litigation on golf ball design.

TaylorMade-adidas Golf
104 Hidden Lake Circle
Duncan, SC 29334

VP OF R & D AND HEAD OF GOLF BALL TECHNICAL OPERATIONS – 2003 through 2004

RESPONSIBILITIES: Interacted with various golf OEM ball vendors to produce new products. Acted as a liaison between R & D and the suppliers to explain product requirements, new material implementation/commercialization and provide two-way feedback between the groups. Conduct training seminars on ball performance and assist with product quality and supply chain requirements. Assist with development of intellectual property and interpretation of competitive patents as they relate to material use and process requirements. Interact with golf professionals to validate product performance.
ACCOMPLISHMENTS: Assisted with the development of six new golf ball products, two of which were my direct responsibility. Improved quality and reduced costs associated with implementation of these new products.

Dunlop Slazenger Group
100 Maxfli Drive
Westminster, SC 29693

VICE PRESIDENT – GOLF R & D WORLDWIDE - 1995 - 2003

RESPONSIBILITIES: Managed a diverse department of 22 associates tasked with the worldwide development effort for new golf products. This included management of intellectual property portfolio and development/defense of patents for new and existing products. Focused on creation of new technologies, materials and processes to enhance existing product performance and deliver innovative, leading edge products to the customer. Worked with top PGA and LPGA Tour pros such as Jack Nicklaus, Greg Norman, Fred Couples and Se Ri Pak to gain validation for new products.
ACCOMPLISHMENTS: Provided leadership to a department that was not moving ahead by directing a complete overhaul of the process used to design new products. Created the platform for the Dunlop, Slazenger and Maxfli brands to move to the forefront of golf ball technology and improve their relative leadership positions in the golf industry. One product, the Revolution golf ball, achieved the position as the best performing golf ball sold in the world. This was followed by the A^{10}, which supplanted it as the best performing ball. Nationally recognized as an expert on golf ball performance and technology. Widely quoted in all of the leading golf magazines as well as TV and radio appearances. Received Maxfli Award of Inspiration, which was given by the Maxfli sales force to recognize dedication and leadership. Co-inventor of numerous patents and pending patents related to golf ball technology and process development.

Titleist/FootJoy Worldwide
333 Bridge Street
Fairhaven, MA 02719

SENIOR PROJECT MANAGER - URETHANE - 1993 - 1995

RESPONSIBILITIES: Supervised 70 associates and two professionals in the day-to-day activities required to produce the Titleist "Professional" golf ball.
ACCOMPLISHMENTS: Designed and established a completely new process and manufacturing department, which evolved from a one shift, five-day week operation to a three shift, seven-day week operation over a one-year period. Developed and implemented a totally new pay program (skill-based pay) for all associates. Demand for the product outpaced capacity since its initial introduction and eventually achieved the #1 ball rating on the PGA Tour. Nationally recognized in the industry as the "father" of urethane golf balls. Co-inventor of several patents covering products and processes related to the development and production of urethane covered golf balls.

SENIOR PROJECT MANAGER - R & D - 1988 - 1993

RESPONSIBILITIES: Supervised three professionals and two technicians in the design and implementation of new golf ball products/processes into production.
ACCOMPLISHMENTS: Designed/developed process for a unique new golf ball and implemented into production. This product was entirely new to the golf ball industry and previous attempts by competitors to create a product of this type were unsuccessful. Promoted to head of manufacturing for this product.

Tambrands, Inc.
Palmer, MA 01069

SENIOR INDUSTRIAL ENGINEER - 1982 - 1988

RESPONSIBILITIES: Supervised one professional. Trained new personnel relative to products and processes. Designed/implemented new production methods/processes for new products. Responsible for implementation and maintenance of MRP II inventory system from the bills of material side. Conducted feasibility studies on new products and acted as an in-house consultant to outside contract packagers.
ACCOMPLISHMENTS: Tripled production capacity for a new product to meet national debut. Developed Engineering Training manual for entry-level engineers. Assisted numerous outside vendors in improvement of production methods and capacity increases. Achieved over $600K in cost savings related to process and material improvements.

Spalding Sports Worldwide
Chicopee, MA 01013

MANAGER, INDUSTRIAL ENGINEERING - 1979 - 1982

RESPONSIBILITIES: Supervised engineers and technicians handling IE requirements for the factory. Coordinated the Productivity Improvement Program and controlled the wage incentive system for balls and clubs. Numerous other assignments such as packaging improvements, strategic planning, new material handling concepts and Quality Circle Leader Training.
ACCOMPLISHMENTS: Directly responsible for more than $250K in cost savings involving packaging changes and labor improvements. Additional savings of $120K achieved through development of proprietary assembly and handling techniques for golf clubs. Recipient of Questor Corp. award for management excellence.

Nissen Corporation
Cedar Rapids, IA 52406

ASSISTANT DIRECTOR - R & D - 1977 - 1979

RESPONSIBILITIES: Supervised two technicians in the design, construction and implementation of new gymnastics equipment and weight machines from concept to production. Created specifications for manufacturing, installation and maintenance of equipment.

ACCOMPLISHMENTS: Achieved leadership position in cost reduction program. Designed and built equipment using original and patentable concepts. Nationally recognized gymnastics coach and as an expert on gymnastics equipment design.

ASSOCIATED ACTIVITIES

Member - Golf Digest Technical Panel - 1998 to 2007
Primary Delegate - Polyurethane Manufacturers Association - 1989 to 2000
Senior Member - Institute of Industrial Engineers (IIE) – 1988 - 1996
Institute of Industrial Engineers - Local Chapter President – 1988/89
IIE District Award Winner - Community Affairs Project - 1988
Member – American Society of Mechanical Engineers – 1999 to 2005
Certified Teacher – State of Massachusetts – Biology, Chemistry and English

REFERENCES

Will be supplied as requested.

CERTIFICATE OF SERVICE

The undersigned attorney hereby certifies that a true and accurate copy of the foregoing AMENDMENT IN REPLY TO ACTION OF MAY 26, 2009 was served via first class mail, postage paid this 27th day of July 2009, to:

Clinton H. Brannon
Howrey LLP
1299 Pennsylvania Avenue, NW
Washington, DC 20004

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22501-0006RX2	EM404815174US	July 27, 2009	*Do Not Mark in This Area*
Application No.	Filing Date	Attorney/Secretary Init	
95/000,444	March 3, 2009	JEG/DPW/lls	
Title of the Invention			
INTER PARTES REEXAMINATION OF US 6,623,381			
Applicant			
Enclosures			
Amendment in Reply to Action of May 26, 2009 (19 pages) Order (31 pages) Transcript of Deposition of R. Dennis Nesbitt (6 pages) Declaration of John Calabria (7 pages) Certificate of Service (1 page)			